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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/434,985 11/05/99 JITARU I 1675B.1A.1

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MMC2/0329

EXAMINER

MAI, A

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 03/29/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**09/434,985**

Applicant(s)  
**Jitaru**

Examiner  
**Anh Mai**

Group Art Unit  
**2832**



☒ Responsive to communication(s) filed on Dec 29, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-28 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-5, 9-12, 14-16, 18, and 20-28 is/are rejected.

☒ Claim(s) 6-8, 13, 17, and 19 is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☒ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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**DETAILED ACTION**

***Response to Amendment***

1. The power of attorney has *not* been entered because it does not indicate the withdrawal of the current power of the attorney from the declaration.
2. The change of address has *not* been entered because it is not signed by an attorney of record.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 2-3, 10-11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no written description of “shielding winding” in the original specification. At most, the specification discloses “a shield 54 located between the primary and secondary winding” [page 13, 16-17 and figure 5] to suppressing some of common mode noise.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-3, 7-8, 10-11 and 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 7-8 and 14-15 what does applicant intend by an "open loop"?

Open loop of what? An open loop circuit? Is it shown in the drawing?

With respect to claims 2-3 and 10-11, "shielding winding" is unclear. It appears to be a shield or shielding layer 54 is disclosed. Applicant should clarify.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 10-12, 14-16, 18, 20, 22-25 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godek et al. [US 5321380] in view of Haertling et al. [US 5532667].

Godek discloses:

- a printed circuit board of dielectric sheet 10;

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- a first transformer having first core 82 extending through dielectric sheet and a first set of electrically conductive windings 50;
- a second transformer having a second core 42 extending through dielectric sheet and a second set of electrically conductive windings 32;
- conductive trace 22 communicating with first set of conductive winding [figure 4];
- first and second sets of conductive windings are electrically encapsulated [figure 5].

Godek discloses the instant claimed invention except for the circuit board having multi layer of electric sheets. Haertling discloses a multi layer transformer wherein the conductive element 256b are in between two adjoining layers 254, 256 of dielectric sheets [figure 12]. It would have been obvious to a person of ordinary skill in the art to have multi layer of dielectric sheets as taught by Haertling to Godek. The motivation would have been to reduce the creepage distance inside the transformer. Therefore, it would have been obvious to combine Haertling with Godek.

With respect to claims 2-3, Haertling discloses a magnetic shield for outer conductive pattern to protect the element from external magnetic fields [col 5, lines 54-59 and figures 5-6]. Therefore, it would have been obvious to combine Haertling with Godek.

6. Claims 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godek et al. in view of Haertling et al. as applied to claims 20 and 24 above, and further in view of Cassese et al. [US 5949191].

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Godek and Haertling disclose the instant claimed invention except for a heat sink connected to multilayer circuit board. Casese discloses a heat sink 1 as base layer of the circuit layer 2 [figure 1]. It would have been obvious to a person of ordinary skill in the art to have a heat sink as taught by Haertling to Godek. The motivation would have been to cool the planar circuit. Therefore, it would have been obvious to combine Casese with Godek in view of Haertling .

*Allowable Subject Matter*

7. Claims 6, 13, 17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 6 and 13 recite, inter alia, *a first set of conductive winding including "quiet winding" and second set of conductive winding being positioned proximate to the "quiet winding"*.

Claims 17 and 19 recite, inter alia, *a third core extending through layers of dielectric sheets; a third set of electrically conductive winding, at least one of the windings of the third set of electrically conductive winding contained between two joining layers of dielectric sheets.*

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

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8. Claims 7-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 7-8 recite, inter alia, *a secondary set of winding positioned to have electrical flow induced therein by the first core and further including an open loop positioned to inject a current through parasitic capacitance in the secondary windings.*

#### ***Response to Arguments***

9. Applicant's arguments filed December 29, 00 have been fully considered but they are not persuasive.

Applicant argues that "open loop" means "not closed". It is not agreed. Examiner found "open loop" in electrical field is more than "not closed" [copies of definition of various dictionaries enclosed]. Further applicant argues that pate 15, lines 8-15 of the specification describes a noise cancellation winding 82 which is shown in figure 10 as being open loop. This is absolutely unacceptable, there is nothing in the specification to disclose the "open loop" and winding 82 is a cancellation winding [figure 10] added in order to reduce the common mode noise injection to the secondary. It is not an "open magnetic circuit" or "open electric" as argued by applicant.

With respect to claims 1-5, applicant argues that neither Godek nor Haertling disclose the (1) two transformers having electrical windings *contained between two adjoining layers of the*

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*dielectric sheets*, and (2) an electrically conductive trace that is *contained between two adjoining layers of the dielectric sheets*. Applicant also has accused examiner for failing establish a *Prima Facie* Case of Obviousness and the combination of cited references fails to yield present invention. The examiner strongly disagrees. Applicant simply chooses to ignore the reason for modifying Godek as provided by the examiner. Once the examiner has set forth a *prima facie* case of obviousness by showing a claimed limitation is taught or suggested by the prior art, the burden then shifts to applicant to show the statement for obviousness is in error. In the instant application, the examiner has indeed established a proper case of obviousness but the applicant has failed to challenge the examiner's assertion. This can only mean the applicant acquiesces to the examiner's position that Haertling reference shows a multilayer transformer wherein the conductive element 256b are in between two adjoining layers 254, 256 of dielectric sheets [figure 12].

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period



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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Mai whose telephone number is (703) 308-2900.

If attempt to reach the examiner by phone unsuccessful, the examiner's supervisor, Michael Gellner, can be reach at (703) 308-1721.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2800 receptionist whose telephone number is (703) 308-0956. The fax phone numbers for this Technology Center are (703) 305-3431/3432.



Anh Mai

Patent Examiner, AU 2832

March 28, 2001